

REMARKS

Claims 1-20, and 22-26 are pending with claim 21 canceled and claims 22-26 being added.

Claim Amendments

Claims 6 and 7 have been amended to include –to-- before “claim”. The term “to” was present in original claims 6 and 7, but inadvertently omitted from amended claim 7 and twice amended claim 6 in Applicants’ Supplemental Amendment and Reply filed November 14, 2001. These amendments are made to correct inadvertent errors and do not narrow the scope of these claims.

Claim Rejections Under 35 U.S.C. §103(a)

Claims 1-21 stand rejected as allegedly being unpatentable over WO 95/30716(WO) in view of EP 0367629 (EP). Particularly, the Action replies to Applicants’ last paper, the Supplemental Amendment and Reply, by alleging that the submitted Declaration was unpersuasive. Particularly, the Action alleges that the Declaration merely states that WO and EP do not show micromilled particles, do not show how the micromilled particles or irregularly-shaped particles affect how the invention can be more effectively laser marked, and do not show how a rough versus smooth surface of absorber particles changes laser-markable plastics. Applicants respectfully traverse these rejections.

At the outset, the Declaration submitted with Applicants’ Supplemental Amendment and Reply filed November 14, 2001, provides evidence by one skilled in the art. Particularly, one of skill in the art attests that none of the cited prior art documents disclose micromilled particles with an irregular surface for use as absorbers in plastics. Applicants respectfully submit that this evidence should be given full patentable weight. In addition, Applicants traverse any assertion in the Action that the shape of configuration is a matter of choice to one skilled in the art or optimizable. Applicants respectfully traverse any suggestion that these irregularly-shaped particles in the context of the present invention are known to be effective or optimizable and respectfully request that the Examiner support her position by providing at least one reference so the Applicants may consider the reference and offer distinguishing comments. See M.P.E.P. §2144.03.

In addition, the Declaration contained REM photographs which clearly show that the

particles of the present invention are neither spherical nor smooth. In marked contrast, WO discloses a micropowder with particles having a “spherical and an essentially smooth surface” structure. See WO Abstract. Applicants respectfully submit that one of ordinary skill in the art would readily recognize that spherical or smooth particles as disclosed by WO are clearly distinct from the irregular-shaped particles of the present invention. Moreover, the difference in shapes of the particles of the present invention versus the micropowder particles of WO are due to their different preparation processes. Particularly, WO discloses that the micropowder is prepared by spray-drying, whereas the particles of the present invention are prepared by micromilling of plastics. Thus, the irregular-shaped particles are no mere selection, but a property of the particles themselves, in a way not disclosed, to produce different particles. Because there is no reason given in the Action why one of skill in the art would optimize by making the particles irregularly-shaped, particularly in view of the WO reference teaching a spherical or smooth shape, there is no motivation for one of skill in the art to make this modification.

Moreover, new independent claim 23 and claim 6 define a laser-markable plastic further comprising a further absorber of one or more light-sensitive pigments. Typically, laser-marking is preferably carried out using high energy radiation. Due to the use of light-sensitive pigments, it is possible in the present invention to use a much lower energy radiation. As a consequence, thin lacquer layers and thin papers can be laser-marked without having the negative influence of the marking process, like the appearance of black dots or holes. Consequently, the presence of the further absorber of one or more light-sensitive pigments permits the laser marking at lower energy radiation levels, thus preventing the appearance of unwanted marks or holes in the marked substrate. Although WO discloses silicon dioxide, Applicants respectfully request that the Action point out where WO discloses that silicon dioxide is used as a light-sensitive pigment. Absent such a disclosure, this feature in the context of the present invention is also not suggested by the cited prior art. Similarly, Applicants respectfully submit that WO fails to disclose other light-sensitive pigments as defined by newly added claims 24-26.

In view of the above remarks, favorable reconsideration is courteously requested. Attached hereto is a marked-up version of the changes made to the claims by the current amendment. The attached page is captioned, "**VERSION WITH MARKINGS TO SHOW CHANGES MADE**". If there are any remaining issues which can be expedited by a telephone conference, the Examiner is courteously invited to telephone Counsel at the number indicated below.

Respectfully submitted,



#32,004

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS

Claims 1 and 7 have been amended as follows:

1. (Twice Amended) A laser-markable plastic comprising a plastic and an absorber material of a laser-markable polymer in the form of irregular-shaped micromilled particles having a particle size of 0.1 - 100 μm .

6. (Thrice Amended) A laser-markable plastic according to Claim 1, wherein the absorber material additionally comprises, as further absorber, one or more light-sensitive pigments.

7. (Twice Amended) A laser-markable plastic according to Claim 6, wherein the light-sensitive pigment is natural or synthetic mica, copper phosphate, a special-effect pigment, a conductive pigment, a metal nitrate, a metal sulfate, a metal sulfide or a metal oxide.